

PRODUCT SUMMARY

KODAK KAF-10500 IMAGE SENSOR

3970 (H) X 2646 (V) FULL FRAME CCD COLOR IMAGE SENSOR

DESCRIPTION

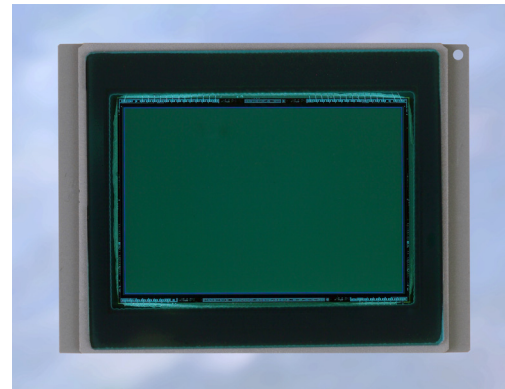
The KAF-10500 is a dual output, high performance color CCD (charge coupled device) image sensor with 3970(H) x 2646(V) photoactive pixels designed for a wide range of color image sensing applications including digital imaging. Each pixel contains anti-blooming protection by means of a lateral overflow drain thereby preventing image corruption during high light level conditions. Each of the 6.8µm square pixels are selectively covered with red, green or blue pigmented filters for color separation. Microlenses are added for improved sensitivity. The total chip size is 28.7 mm x 20.2 mm and is housed in a 60 pin, 40.6 mm x 30.7 mm PGA ceramic package with 0.100" pin spacing.

FEATURES

- High resolution
- Broad dynamic range
- Low noise
- Large image area

APPLICATIONS

- Digital Still Cameras



Parameter	Typical Value
Architecture	Full Frame CCD (Square Pixels)
Total Number of Pixels	4098 (H) x 2728 (V) = 11.2 Mp
Number of Effective Pixels	4010 (H) x 2686 (V) = 10.8 Mp
Number of Active Pixels	3970 (H) x 2646 (V) = 10.5 Mp
Pixel Size	6.8 µm (H) x 6.8 µm (V)
Active Image Size	27.0 mm (H) x 18.0 mm (V) 32.44 mm (diagonal)
Aspect Ratio	3:2
Horizontal Outputs	2
Saturation Signal	60 ke ⁻
Output Sensitivity	25 µV/e ⁻
Quantum Efficiency (RGB)	21%, 40%, 32%
Read Noise (f=24 MHz)	15 e ⁻
Dark Signal (T=40 °C)	4 mV
Dark Current Doubling Temperature	6.3 °C
Linear Dynamic Range (f=24 MHz, T=40 °C)	71.5 dB
Charge Transfer Efficiency (HCTE/VCTE)	0.999995 0.999999
Blooming Protection (4 ms exposure time)	1000X saturation exposure
Maximum Data Rate	24 MHz
Package	Ceramic PGA
Cover Glass	IR Absorbing with AR Coating (both sides)

Parameters above specified at T = 20°C unless otherwise noted

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
4H0799	KAF-10500-CXA-JH-AA-Offset	Color (Bayer RGB), Special Microlenses, PGA Package, IR Absorbing Cover Glass with AR coating (both sides), Standard grade	KAF-10500-CXA (Serial Number)
4H0800	KAF-10500-CXA-JH-AE-Offset	Color (Bayer RGB), Special Microlenses, PGA Package, IR Absorbing Cover Glass with AR coating (both sides), Engineering grade	
4H0846	KEK-4H0846-KAF-10500-12-24	Evaluation Board (Complete Kit)	N/A

Please see the User's Manual (MTD/PS-0982) for information on the Evaluation Kit for this part.

Please see ISS Application Note "Product Naming Convention" (MTD/PS-0892) for a full description of naming convention used for KODAK image sensors.

For all reference documentation, please visit our Web Site at www.kodak.com/go/imagers.

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